

AMENDMENTS TO THE CLAIMS:

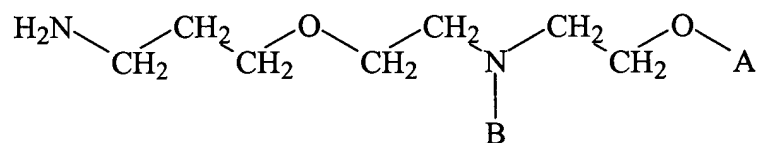
Please amend the claims as indicated below:

1.(currently amended) A composition comprising:

an aqueous based continuous phase;

a viscosifying agent; and

a shale hydration inhibition agent having the formula:



wherein A is independently selected from H and CH₂CH₂CH₂NH₂; and

wherein B is independently selected from H, CH₂CH₂OH, CH₂CH₂OCH₂CH₂CH₂NH₂ and CH₂CH₂CH₂NH₂; and

wherein the shale hydration inhibition agent is present in sufficient concentration to reduce the swelling of shale.

2. (original) The composition of claim 1 wherein the shale hydration inhibition agent is the reaction product of a hydrogenation reaction of the product of the reaction of triethanolamine and acrylonitrile

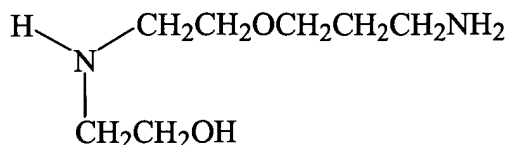
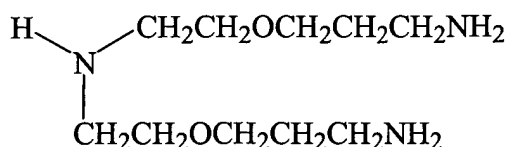
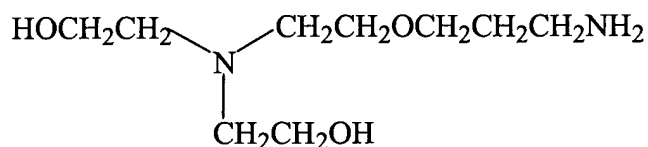
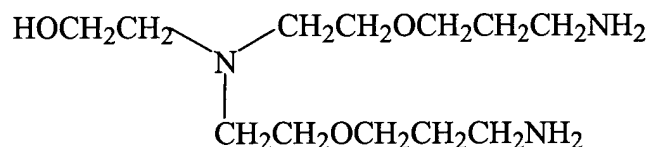
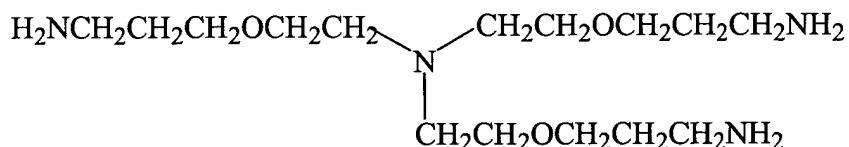
3. (original) The composition of claim 1 wherein the shale hydration inhibition agent is the reaction product of a hydrogenation reaction of the product of the reaction of diethanolamine and acrylonitrile

4. (original) The composition of claim 1 wherein the aqueous based continuous phase is selected from: fresh water, sea water, brine, mixtures of water and water soluble organic compounds and mixtures thereof.

5. Canceled

6. (original) The composition of claim 1 further comprising a weighting material selected from the group consisting of barite, calcite, hematite, iron oxide, calcium carbonate, organic and inorganic salts, and mixtures thereof.

7. (original) The composition of claim 1 wherein shale hydration inhibition agent is selected from:



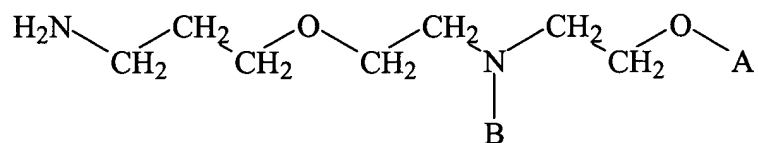
and mixtures of these.

8. (original) A water-base drilling fluid for use in drilling a subterranean well through one or more subterranean formations containing a shale which swells in the presence of water, the drilling fluid comprising:

an aqueous based continuous phase;

a weighting agent; and

a shale hydration inhibition agent having the formula:



wherein A is independently selected from H and $\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$; and

wherein B is independently selected from H, $\text{CH}_2\text{CH}_2\text{OH}$, $\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{CH}_2\text{NH}_2$ and $\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$; and

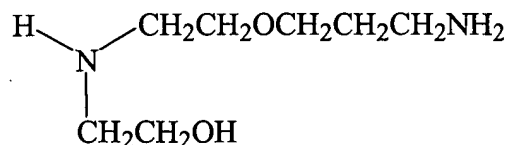
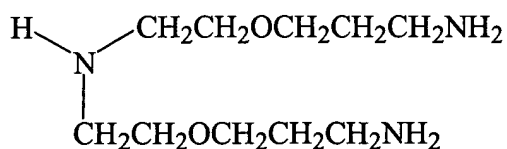
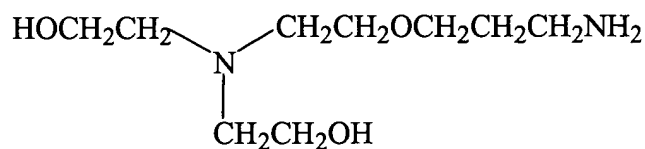
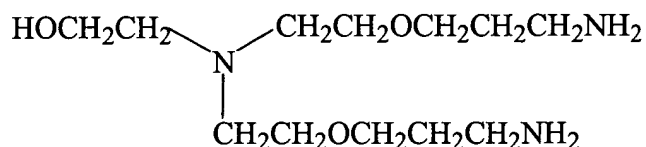
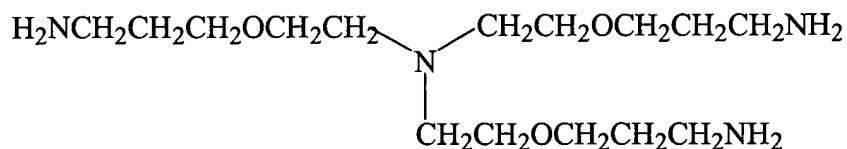
wherein the shale hydration inhibition agent is present in sufficient concentration to reduce the swelling of the shale.

9. (original) The composition of claim 8 wherein the shale hydration inhibition agent is the reaction product of a hydrogenation reaction of the product of the reaction of triethanolamine and acrylonitrile

10. (original) The composition of claim 8 wherein the shale hydration inhibition agent is the reaction product of a hydrogenation reaction of the product of the reaction of diethanolamine and acrylonitrile

11. (original) The composition of claim 8 wherein the aqueous based continuous phase is selected from: fresh water, sea water, brine, mixtures of water and water soluble organic compounds and mixtures thereof.

12. (original) The composition of claim 8 further comprising a viscosifying agent .
13. (original) The composition of claim 8 wherein the weighting agent is selected from the group consisting of barite, calcite, hematite, iron oxide, calcium carbonate, organic and inorganic salts, and mixtures thereof.
14. (original) The composition of claim 8 wherein shale hydration inhibition agent is selected from:



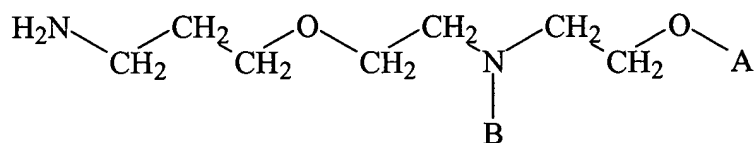
and mixtures of these.

15. (original) A drilling fluid for use in drilling a subterranean well through one or more subterranean formations containing a shale which swells in the presence of water, the fluid comprising:

an aqueous based continuous phase;

a viscosifying agent and

a shale hydration inhibition agent having the formula:



wherein A is independently selected from H and $\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$; and

wherein B is independently selected from H, $\text{CH}_2\text{CH}_2\text{OH}$, $\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{CH}_2\text{NH}_2$ and $\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$; and

wherein the shale hydration inhibition agent is present in sufficient concentration to reduce the swelling of shale.

16. Canceled

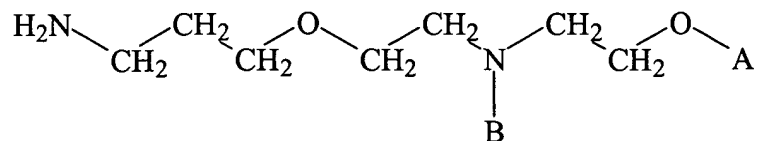
17. (original) The composition of claim 15 further comprising a weighting material selected from the group consisting of barite, calcite, hematite, iron oxide, calcium carbonate, organic and inorganic salts, and mixtures thereof.

18. (original) A fracturing fluid for use in a subterranean well through one or more subterranean formations containing a shale which swells in the presence of water, the fluid comprising:

an aqueous based continuous phase;

a viscosifying agent and

a shale hydration inhibition agent having the formula:



wherein A is independently selected from H and $\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$; and

wherein B is independently selected from H, $\text{CH}_2\text{CH}_2\text{OH}$, $\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{CH}_2\text{NH}_2$ and $\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$; and

wherein the shale hydration inhibition agent is present in sufficient concentration to reduce the swelling of shale.

19. Canceled

20. (original) The composition of claim 18 further comprising a weighting material selected from the group consisting of barite, calcite, hematite, iron oxide, calcium carbonate, organic and inorganic salts, and mixtures thereof.

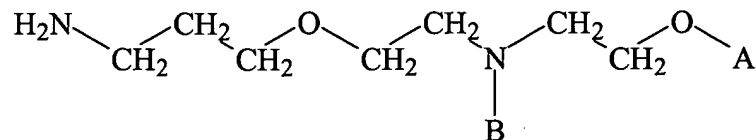
21. (original) A method comprising

drilling a subterranean well through one or more subterranean formations containing a shale which swells in the presence of water, wherein the drilling is carried out using a drilling fluid including:

an aqueous based continuous phase;

a weighting agent; and

a shale hydration inhibition agent having the formula:



wherein A is independently selected from H and $\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$; and

wherein B is independently selected from H, CH₂CH₂OH, CH₂CH₂OCH₂CH₂CH₂NH₂ and CH₂CH₂CH₂NH₂; and

wherein the shale hydration inhibition agent is present in sufficient concentration to reduce the swelling of shale.

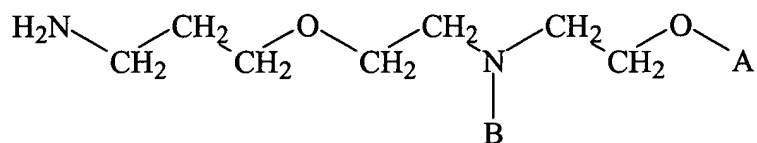
22. (original) The method of claim 21 wherein the weighting agent is selected from the group consisting of barite, calcite, hematite, iron oxide, calcium carbonate, organic and inorganic salts, and mixtures thereof.

23. – 30. Canceled without prejudice.

31. (original) A method of reducing the swelling of shale clay in a well comprising circulating in the well a water-base drilling fluid comprising:

an aqueous based continuous phase and

a shale hydration inhibition agent having the formula:



wherein A is independently selected from H and CH₂CH₂CH₂NH₂; and

wherein B is independently selected from H, CH₂CH₂OH, CH₂CH₂OCH₂CH₂CH₂NH₂ and CH₂CH₂CH₂NH₂; and

wherein the shale hydration inhibition agent is present in sufficient concentration to reduce the swelling of the shale.

32. (original) The method of claim 31 wherein the shale hydration inhibition agent is the reaction product of a hydrogenation reaction of the product of the reaction of triethanolamine and acrylonitrile

33. (original) The method of claim 31 wherein the shale hydration inhibition agent is the reaction product of a hydrogenation reaction of the product of the reaction of diethanolamine and acrylonitrile

34. (original) The method of claim 31 wherein the aqueous based continuous phase is selected from: fresh water, sea water, brine, mixtures of water and water soluble organic compounds and mixtures thereof.